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FOOD WRAPPING

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(57) Claim

1. A method of wrapping and bagging meat comprising the steps of wrapping around at least the bone bearing portion of the meat, a wax coated polypropylene fabric, before air tight bagging of the meat.

3. A process for preparing a wrapping for meat, said wrapping adapted to resist piercing by sharp bones contained in the meat, the process including the steps of

- (i) soaking a polypropylene fabric in liquid wax, and
- (ii) cooling the fabric to harden the wax in the form of a coating.



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COMPLETE SPECIFICATION

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Complete Specification for the invention entitled:

FOOD WRAPPING

The following statement is a full description of this invention, including the best method of performing it known to ~~the~~ us:

* Note: The description is to be typed in double spacing, pica type face, in an area not exceeding 250 mm in depth and 160 mm in width, on tough white paper of good quality and it is to be inserted inside this form.

The present invention relates to the wrapping and bagging of foods and particularly to the wrapping and bagging of those foods that have sharp edges, such as bone bearing meats, that may pierce the materials used to wrap and bag them. For the sake of example only, the specification will describe the wrapping and bagging of bone bearing meats.

Conventionally, bone bearing meats, such as racks of lamb, have been wrapped in a wax coated woven cotton so as to cover at least the bone bearing portion of the meats before being bagged and made available to the consumer. The cotton used for wrapping is not bleached or otherwise pretreated before waxing and so the wax coated cotton may contain cotton seed remnants or other contaminants that lead to undersirable mould growth in the finished product. Furthermore, the waxed untreated cotton has an unsightly off-white colour and may develop an odour over time.

An additional disadvantage of using wax coated woven cotton is that, as the cotton is woven with a transverse weaving style, the sharp bones of the meat being wrapped may push through the threads or weaken an area of the cross woven cotton fabric, even though it is wax coated, and lead to piercing of the outer bag, thereby exposing the meat to the atmosphere, whereafter the meat may become spoiled.

Although the first abovementioned problem of untreated woven cotton may be overcome by appropriate bleaching and



pretreatment, the second problem of the woven cotton being readily penetrated by sharp bones cannot be addressed by any treatment of the cotton itself without undermining the efficacy of the wax coated cotton to wrap meats.

5 Hence the inventors have been forced to look at other fabrics for the needed strength and resistance against spoilage.

 It is an object of the present invention to provide a material for the wrapping of meats, and particularly bone
10 bearing meats, that will overcome the problems of the prior art.

 According to the invention, there is provided a method of wrapping and bagging meat comprising the steps of wrapping around at least the bone bearing portion of the meat, a wax
15 coated polypropylene fabric, before air tight bagging of the meat.

 Preferably, the polypropylene fabric is spun bonded.

 According to another aspect of the invention, there is provided a process for preparing a wrapping for meat, said
20 wrapping adapted to resist piercing by sharp bones contained in the meat, the process including the steps of

- (i) soaking a polypropylene fabric in liquid wax, and
- (ii) cooling the fabric to harden the wax in the form of a coating.

25 According to still another aspect of the invention, there is provided a wrapping for meat, whenever prepared by the abovementioned process.



In order that the invention may be more readily understood and put into practical effect, reference will now be made to the accompanying drawings, in which:-

Fig 1. is an isometric view of a prior art cotton
5 fabric wrapping around the bone bearing portion
of a rack of lamb, with the bones protruding
through the cotton fibres of the fabric,

Fig. 2 is an isometric view of a preferred wax coated
10 spun bonded polypropylene fabric wrapping around
the bone bearing portion of the same rack of lamb
as in Fig. 1, but without the bones protruding
through the polypropylene fabric,

Fig. 3 is a cut-away close up view of the surface
15 structure of the wax coated spun bonded
polypropylene fabric of Fig. 2, and

Fig. 4 is a schematic diagram of the preferred process
for preparing the wrapping of Figs. 2 and 3.

The prior art cotton fabric 11 shown in Fig. 1 is
wrapped around the bone bearing portion of a rack of lamb 12.
20 Two bones 13 and 14 have pierced the cotton fabric 11 and
protrude therethrough as shown. The transverse weaving of
the cotton fabric is shown severed at tear sites 16 and 17.
The protruding bones 13 and 14 have sharp edges that may
further pierce the outer bag (not shown), thereby exposing
25 the rack of lamb 12 to the atmosphere and accelerated
spoilage.

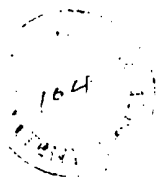


Fig. 2 shows the same rack of lamb 12 having its bone bearing portion wrapped by a wax coated spun bonded polypropylene fabric 15. The bones do not protrude through the fabric as the fabric 15 is structurally resistant to any piercing by the sharp edges of the bones, and so the outer bag (not shown) retains the desired atmospheric seal.

The surface structure of a cut-away portion of the wax coated spun bonded polypropylene fabric 15 is shown close up in Fig. 3. There are no transversely directed polypropylene fibres, but rather the fibres are arranged randomly in a spun bonded manner with a typical pattern of impressed circles 18 on the surface.

Fig. 4 shows in schematic form a preferred process for preparing a wax coated polypropylene fabric that can be used to wrap around the bone bearing portion of the rack of lamb as shown in Fig. 2. Firstly, a sheet 20 of spun bonded (non-woven) polypropylene stored in the form of a roll 21 was unwound and soaked for about 2 seconds in a wax bath 22 at a temperature of between about 120°C and 140°C. Excess wax was then scraped off the sheet by a scraper 23 and the sheet chilled at about 7°C for about 30 seconds in a chiller 24 to harden the wax to form a coating on the sheet 20.

The sheet 20 was then wound at a predetermined tension into a roll 25 until a suitable thickness of roll was formed, whereafter the roll was slit into rolls 26 of narrower sizes for storage and subsequent use.



After the roll 26 of wax coated polypropylene fabric was prepared, a rack of lamb was selected to be wrapped and bagged. A portion 15 of the wax coated polypropylene sheet 20 was cut and wrapped around the rack of lamb 12 as shown in Fig. 2, taking care to cover at least the bones, but leaving outerlying areas of the sheet portion 15 wrapped or overlaid on opposed outerlying areas of the same sheet. The waxy surface acts as an adhesive to bond the two overlying portions of the same sheet together, thereby tightly wrapping the wax coated polypropylene sheet 15 around the bone bearing portion of the rack of lamb 12.

The wrapped rack of lamb was then placed into a triple laminate plastic see-through bag and a vacuum applied to the contents of the bag after sealing the bag opening about the vacuum nozzle. The bag opening was then permanently sealed and the bag and contents prepared for sale.

The inventors have found that by using the wax coated polypropylene wrapping, there has been a remarkable reduction in bag leakage rate from the high rate for prior art wax coated cotton wrapping of about one third. In fact, the leakage rate for meat wrapped in the wax coated polypropylene sheet of the invention is down to about one in fifty which represents a significant diminution in the frequency of product rejects and saves costs overall.

Furthermore, wax coated polypropylene is more structurally rigid than wax coated cotton and so can withstand greater impact pressures that might otherwise lead



to bag leakage by bones piercing through the wax coated cotton wrapping and bag.

Various modifications may be made in details of design, construction, method and process steps, without departing
5 from the scope and ambit of the invention.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A method of wrapping and bagging meat comprising the steps of wrapping around at least the bone bearing portion of the meat, a wax coated polypropylene fabric, before air tight bagging of the meat.
2. The method of claim 1 wherein the polypropylene fabric is spun bonded.
3. A process for preparing a wrapping for meat, said wrapping adapted to resist piercing by sharp bones contained in the meat, the process including the steps of
 - (i) soaking a polypropylene fabric in liquid wax, and
 - (ii) cooling the fabric to harden the wax in the form of a coating.
4. The process of claim 3 wherein the polypropylene fabric is soaked for about 2 seconds in liquid wax at a temperature of between about 120°C and 140°C.
5. The process of claim 3 and including the step of scraping any excess wax off the polypropylene fabric between steps (i) and (ii).
6. The process of claim 3 wherein the fabric is cooled for about 30 seconds at a temperature of about 7°C.
7. A wrapping for meat, wherever prepared by the process of claim 3.

DATED this 16th day of July, 1991

ABPAK PTY LIMITED

By their Patent Attorneys

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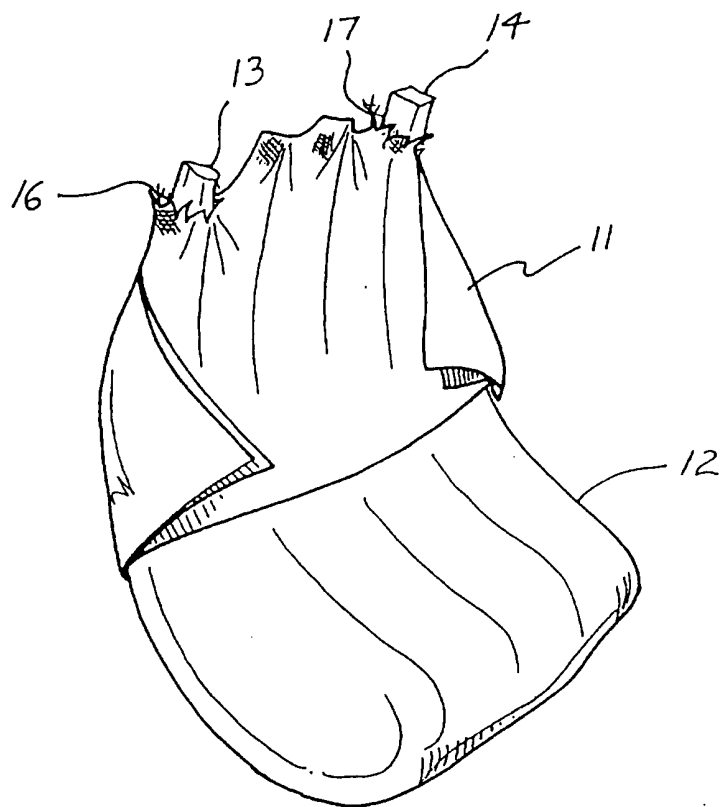


FIG. 1

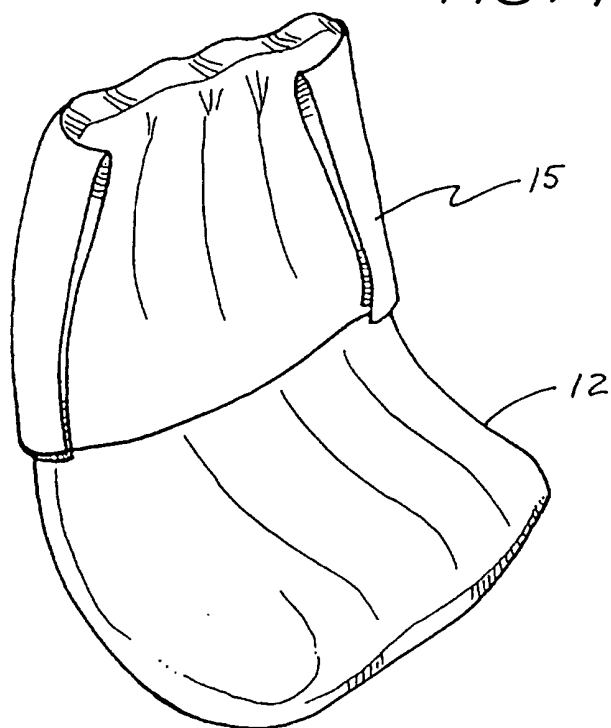


FIG. 2

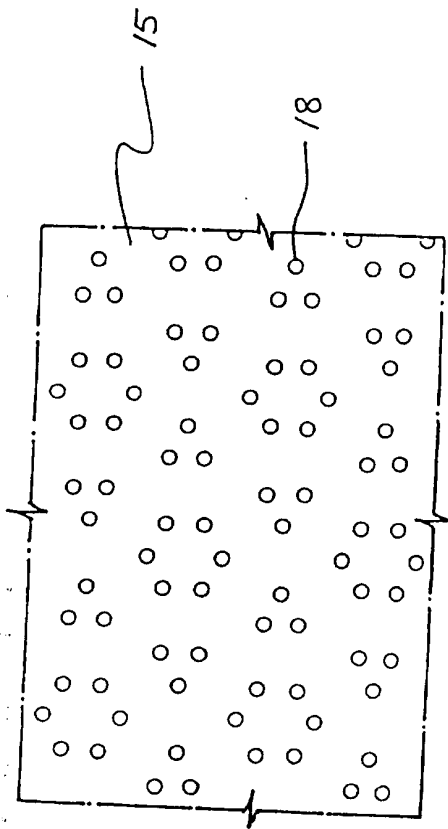


FIG. 3

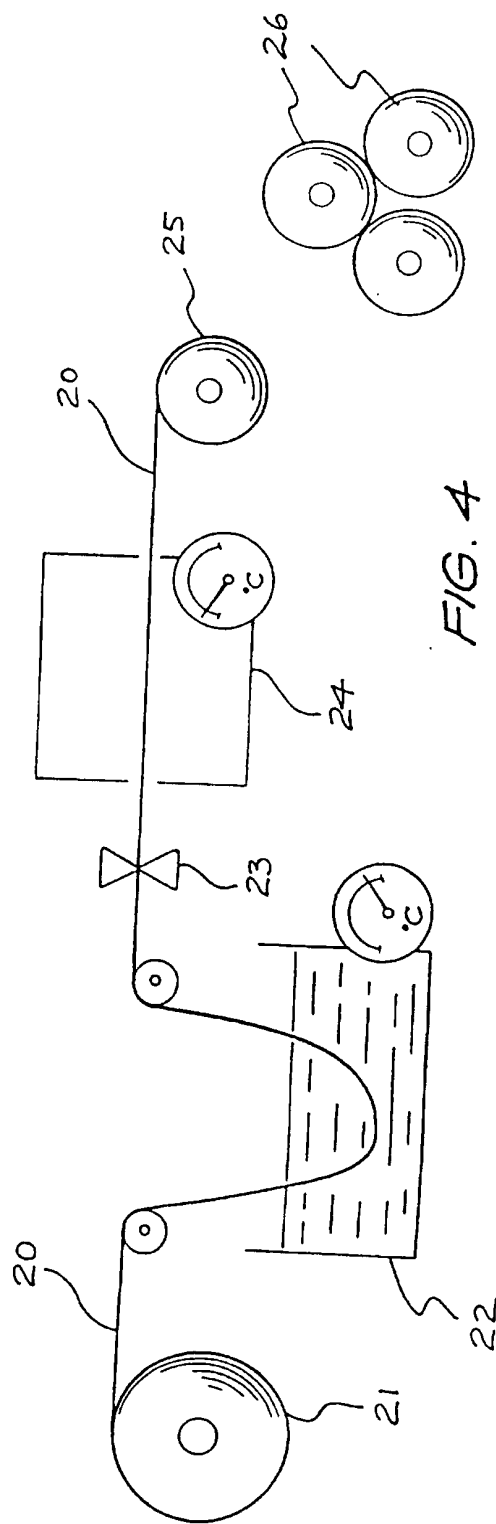


FIG. 4